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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

PATTERSON, MARC A

ART UNIT PAPER NUMBER

1772

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/077,708

Applicant(s)

KIERONSKI, ROBERT V.

Examiner

Marc A Patterson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION
WITHDRAWN REJECTIONS

1. The 35 U.S.C. 112 second paragraph rejections of Claims 7 – 17, of record on page 2 of the previous Action, are withdrawn.

The 35 U.S.C. 102(b) rejection of Claims 7 – 8 as being anticipated by Hull et al (U.S. Patent No. 5,104,592), of record on page 3 of the previous Action, is withdrawn.

The 35 U.S.C. 103(a) rejection of Claims 9 – 14 as being unpatentable over Hull et al (U.S. Patent No. 5,104,592) in view of Komori et al (U.S. Patent No. 5,948,514), of record on page 4 of the previous Action, is withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 7 – 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Hull et al (U.S. Patent No. 5,104,592).

With regard to Claim 7, Hull et al disclose a part (building part; column 12, lines 49 – 56) comprising a first component made from a photocurable polymer (column 2, lines 45 – 56) which is cured (column 12, lines 30 – 32) and having opposing surfaces (column 12, lines 49 – 56; Figure 7) and a material interposed between and bonded to the opposing interior surfaces; (rivets comprising the polymer, which is cured; column 12, lines 49 – 56; Figure 7); the cured

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material is therefore filled between the surfaces, as it partially fills the space between the surfaces.

With regard to Claim 8, the material comprises spaced apart several supports (column 12, lines 49 – 56; Figure 7) and therefore comprises internal supports and separate cured material.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 9 – 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hull et al (U.S. Patent No. 5,104,592) in view of Komori et al (U.S. Patent No. 5,948,514).

Hull et al disclose a part comprising a photocurable polymer as discussed above. With regard to Claim 9, Hull et al fail to disclose a polymer comprising a mixture of an epichlorohydrin resin, catalyst and filler particles.

Komori et al teach a photocurable polymer comprising a mixture of an epichlorohydrin resin (column 13, lines 35 – 42), a catalyst (aid for augmenting curing photocuring properties; column 11, lines 26 – 33) and filler particles (column 12, lines 46 – 59) for the purpose of obtaining a resin which is heat – resistant (column 3, lines 3 – 10). The desirability of providing for a polymer comprising a mixture of an epichlorohydrin resin, catalyst and filler particles in Hull et al, which comprises a photocurable polymer, would therefore be obvious to one of ordinary skill in the art in view of Komori et al.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant's invention was made to have provided for a polymer comprising a mixture of an epichlorohydrin resin, catalyst and filler particles in Hull et al in order to obtaining a resin which is heat – resistant as taught by Komori et al.

With regard to Claim 10, Komori et al teach a methylenedomethylene catalyst (catalyst for dissolution; column 5, lines 66 – 67; column 6, lines 1 – 14).

With regard to Claims 11 – 13, Komori et al teach a filler comprising glass fibers (column 12, lines 46 – 59). Komori et al fail to disclose a methylenedomethylene in a proportion of 80 – 90 weight percent of the epichlorohydrin resin, and glass fibers in the range of 1/32 to 1/64 of an inch in length, and glass fibers in the range of 50 – 60 weight percent of the epichlorohydrin resin. However, Hull et al disclose methylenedomethylene in a proportion of 50 weight percent of the epichlorohydrin resin (column 11, lines 56 – 65), and glass fibers at least in the range of microscopic length (the resin comprises glass fibers; column 12, lines 46 – 59), and glass fibers at least in the range of 1 weight percent of the epichlorohydrin resin (the resin comprises glass fibers; column 12, lines 46 – 59). Therefore, the amounts of methylenedomethylene and glass fibers and the length of the glass fibers. would be readily determined through routine optimization by one having ordinary skill in the art depending on the desired end use of the product. It therefore would be obvious for one of ordinary skill in the art to vary the amounts of methylenedomethylene and glass fibers and the length of the glass fibers, since the amounts of methylenedomethylene and glass fibers and the length of the glass fibers would be readily determined through routine optimization by one having ordinary skill in the art

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depending on the desired end result as shown by Komori et al. *In re Boesch and Slaney*, 205 USPQ 215 (CCPA 1980).

With regard to Claim 14, Komori et al disclose a filler comprising clay (column 12, lines 46 – 59); the claimed aspect of the filler comprising ‘aluminum powder’ therefore reads on Hull et al.

6. Claims 15 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hull et al (U.S. Patent No. 5,104,592) in view of Komori et al (U.S. Patent No. 5,948,514) and further in view of Vandenberg et al (U.S. Patent No. 3,634,303).

Hull et al and Komori et al disclose a part comprising epichlorohydrin as discussed above. With regard to Claims 15 – 17, Hull et al and Komori et al fail to disclose a mesh wetted with a catalyzed epichlorohydrin.

Vandenberg et al teach that a mesh wetted with epichlorohydrin is equivalent to epichlorohydrin (column 15, lines 54 – 62) for the purpose of obtaining a polymeric material having high impact strength (column 16, lines 1 – 12). The desirability of providing for a mesh wetted with a catalyzed epichlorohydrin in Hull et al and Komori et al, which is a building part, would therefore be obvious to one of ordinary skill in the art in view of Vandenberg et al.

It therefore would have been obvious for one of ordinary skill in the art at the time Applicant’s invention was made to have provided for a mesh wetted with a catalyzed epichlorohydrin in Hull et al and Komori et al in order to obtain a polymeric material having high impact strength as taught by Vandenberg et al.

ANSWERS TO APPLICANT'S ARGUMENTS

7. Applicant's arguments regarding the 35 U.S.C. 112 second paragraph rejections of Claims 7 – 17, of record in the previous Action, have been considered and have been found to be persuasive. The rejections are therefore withdrawn.

Applicant's arguments regarding the 35 U.S.C. 102(b) rejection of Claims 7 – 8 as being anticipated by Hull et al (U.S. Patent No. 5,104,592) and 35 U.S.C. 103(a) rejection of Claims 9 – 14 as being unpatentable over Hull et al (U.S. Patent No. 5,104,592) in view of Komori et al (U.S. Patent No. 5,948,514), of record in the previous Action, have been considered but have not been found to be persuasive for the reasons set forth below.

Applicant argues, on page 8 of Paper No. 4, that Hull et al fail to disclose a cured material which is filled in between the opposing surfaces of the component part. However, as stated in the new rejection above, Hull et al disclose a component made from a photocurable polymer (column 2, lines 45 – 56) which is cured (column 12, lines 30 – 32) and having opposing surfaces (column 12, lines 49 – 56; Figure 7) and a material interposed between and bonded to the opposing interior surfaces; (rivets comprising the polymer, which is cured; column 12, lines 49 – 56; Figure 7); the cured material is therefore filled between the surfaces, as it partially fills the space between the surfaces.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc Patterson, whose telephone number is (703) 305-3537. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by phone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (703) 308-4251. FAX communications should be sent to (703) 872-9310. FAXs received after 4 P.M. will not be processed until the following business day.

Marc A. Patterson, PhD.

Marc Patterson
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HAROLD PYON
SUPERVISORY PATENT EXAMINER

1/17/12 *6/14/04*